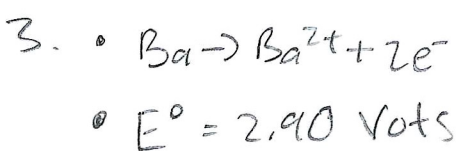
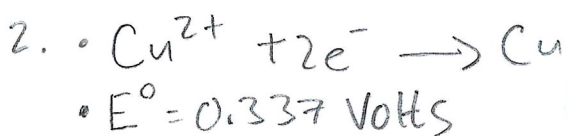


1. The charge must also be balanced. ✓

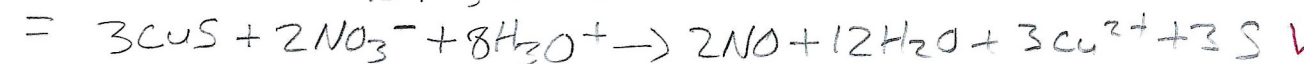
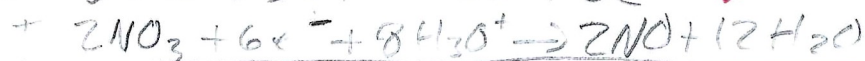
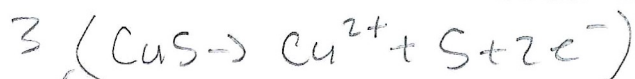
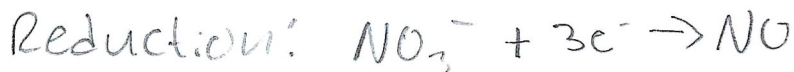
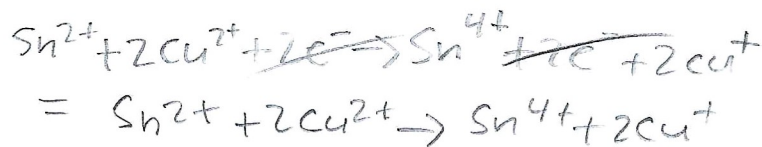
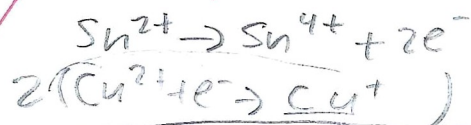
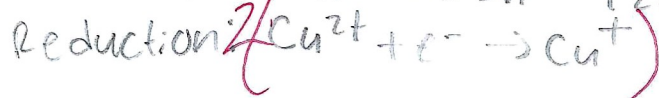
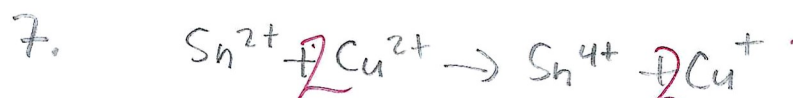
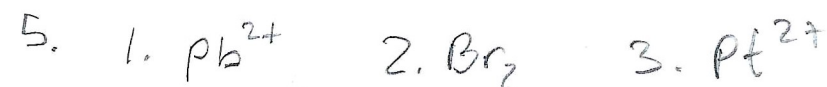
Test #10

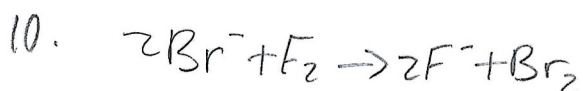
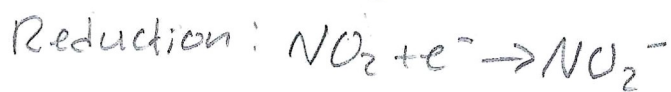
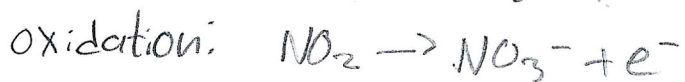


23  
24

96%

4. The half-reaction will have to react with a substance that is positive enough to make both of the potentials positive when they are added together





$E^\circ = -1.0652 \text{ volts}$

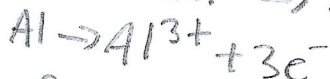


$E^\circ = 2.87 \text{ volts}$

$= 1.80 \text{ volts}$  ✓

$\Delta G = -nFE^\circ$

$= -2(96485)(1.80) = -3.47 \times 10^5 \text{ J/mole}$  ✓



$E^\circ = 1.66 \text{ volts}$



$E^\circ = -0.763$

$= 0.90 \text{ volts}$  ✓

$\Delta G = -6(96485)(0.90) = -5.2 \times 10^5 \text{ J/mole}$  ✓

$\Delta G = -RT(\ln K)$

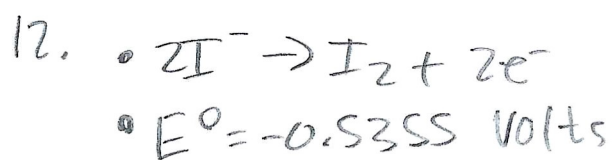
$-5.2 \times 10^5 = -8.314(298) \ln K$

$-5.2 \times 10^5 = -2477.572 \ln K$

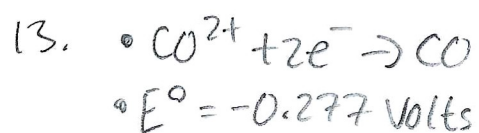
$-2477.572 = -2477.572$

$209.88 = \ln K$

$K = 1 \times 10^{91}$  ✓



To oxidize  $\text{I}^-$  into  $\text{I}_2$  the chemist should use  $\text{Cl}_2$ . ✓



To turn  $\text{Co}^{2+}$  into  $\text{Co}$  the chemist should use  $\text{Na}$ . ✓